



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,135	02/13/2004	Shingo Masuko	025720-00023	3797

7590 01/24/2006

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC  
Suite 400  
1050 Connective Avenue, N.W.  
Washington, DC 20036-5339

EXAMINER

NGUYEN, DONGHAI D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

<b>Office Action Summary</b>	<b>Application No.</b> 10/777,135	<b>Applicant(s)</b> MASUKO, SHINGO	
	<b>Examiner</b> Donghai D. Nguyen	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.  
4a) Of the above claim(s) 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-13 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/13/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-13, drawn to a method of fabricating electronic parts, classified in class 29, subclass 841.
  - II. Claims 14-24, drawn to a baseboard, classified in class 361, subclass 761.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and Group II are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the invention I can be used to make other and materially different product such as an electronic parts having resin sheet covering a top of the baseboard.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Charles M. Marmelstein on January 6, 2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-13.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

Art Unit: 3729

14-24 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

*Specification*

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --METHOD OF PACKAGING ELECTRONIC PARTS-- .

*Claim Rejections - 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, 4, 6-9, 11 and 13 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant Admitted Prior Art (AAPA).

Regarding claim 1, AAPA discloses a method of fabricating electronic parts comprising the steps of: mounting electronic elements (113) in regular cavities (111, 115, central cavities) that are two-dimensionally arranged on a baseboard (110 see Fig. 1) on which dummy cavities (111, peripheral cavities) are provided so as to surround the regular cavities; and covering a top

of the baseboard with a resin sheet (112). Note that the present claimed invention does not exclude the dummy cavities from having mounted electronic elements therein.

Regarding claim 3, Fig. 2 of AAPA shows the regular and dummy cavities can be hermetically sealed.

Regarding claim 4, AAPA discloses in page 2, line 9 dividing the baseboard into separate electronic parts each of which includes one of the electronic elements in a corresponding one of the regular cavities.

Regarding claims 6-9, AAPA discloses the configuration and location of the dummy cavities on the baseboard (see Figs. 1 and 2).

Regarding claim 11, Fig. 2 of AAPA shows the dummy cavities are at least 50  $\mu\text{m}$  deep since the depth of the cavities show in Fig. 2 is about equal to the depth of cavities shows in Fig. 4.

Regarding claim 13, AAPA discloses the electronic elements are surface acoustic wave filter chips, and the electronic parts are surface acoustic wave devices (See page 2, lines 9-12).

9. Claims 1-4, 6-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,268,236 to Miyawaki.

Regarding claim 1, Miyawaki discloses a method of fabricating electronic parts comprising the steps of: mounting electronic elements (7) in regular cavities (4) that are two-dimensionally arranged on a baseboard (1, see Fig. 5) on which dummy cavities (5, 10A-B) are provided so as to surround the regular cavities (as shown in Fig. 5); and covering a top of the

Art Unit: 3729

baseboard with a resin sheet (sheet-like adhesive 3 see Col. 3, lines 61-63 make of resin see Col. 5, lines 46-46).

Regarding claim 2, Miyawaki discloses supplying resin of the resin sheet to given dummy cavities (holes 5, trenches 10A-B) having bottoms that are not metallized (see Figs. 5 and 6).

Regarding claim 3, Fig. 6 of Miyawaki shows the regular and dummy cavities can be hermetically sealed.

Regarding claim 4, Miyawaki discloses diving the baseboard into separate electronic parts each of which includes one of the electronic elements in a corresponding one of the regular cavities (See Fig 2C).

Regarding claims 6-10, Miyawaki discloses the configuration and location of the dummy cavities (holes 5, trenches 10A-B) on the baseboard (see Figs. 3-6).

Regarding claim 12, Miyawaki discloses attaching a wiring board to a backside of the baseboard so that terminals on the wiring boards are electrically connected to terminals (11) in the regular cavities by via interconnections provided in the baseboard (See Col. 3, lines 30-33.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3729

11. Claims 11 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Miyawaki in view of AAPA.

Miyawaki does not disclose the dummy cavities are at least 50  $\mu\text{m}$  deep and the electronic elements are surface acoustic wave filter chips. AAPA teaches the above limitations (Fig. 2) for forming SAW devices (See Applicant's spec. page 2, lines 9-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of AAPA including the dummy cavities are at least 50  $\mu\text{m}$  deep and the electronic elements are surface acoustic wave filter chips into Miyawaki's invention to obtain SAW devices.

#### *Allowable Subject Matter*

12. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references cited for their teaching of packaging electronic parts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (571)-272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

Art Unit: 3729

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN  
January 18, 2006

 1/18/06  
**MINH TRINH**  
**PRIMARY EXAMINER**